

# Green Line Extension

## Environmental Impact Report Public Scoping Session

*Somerville High School  
October 16, 2006*



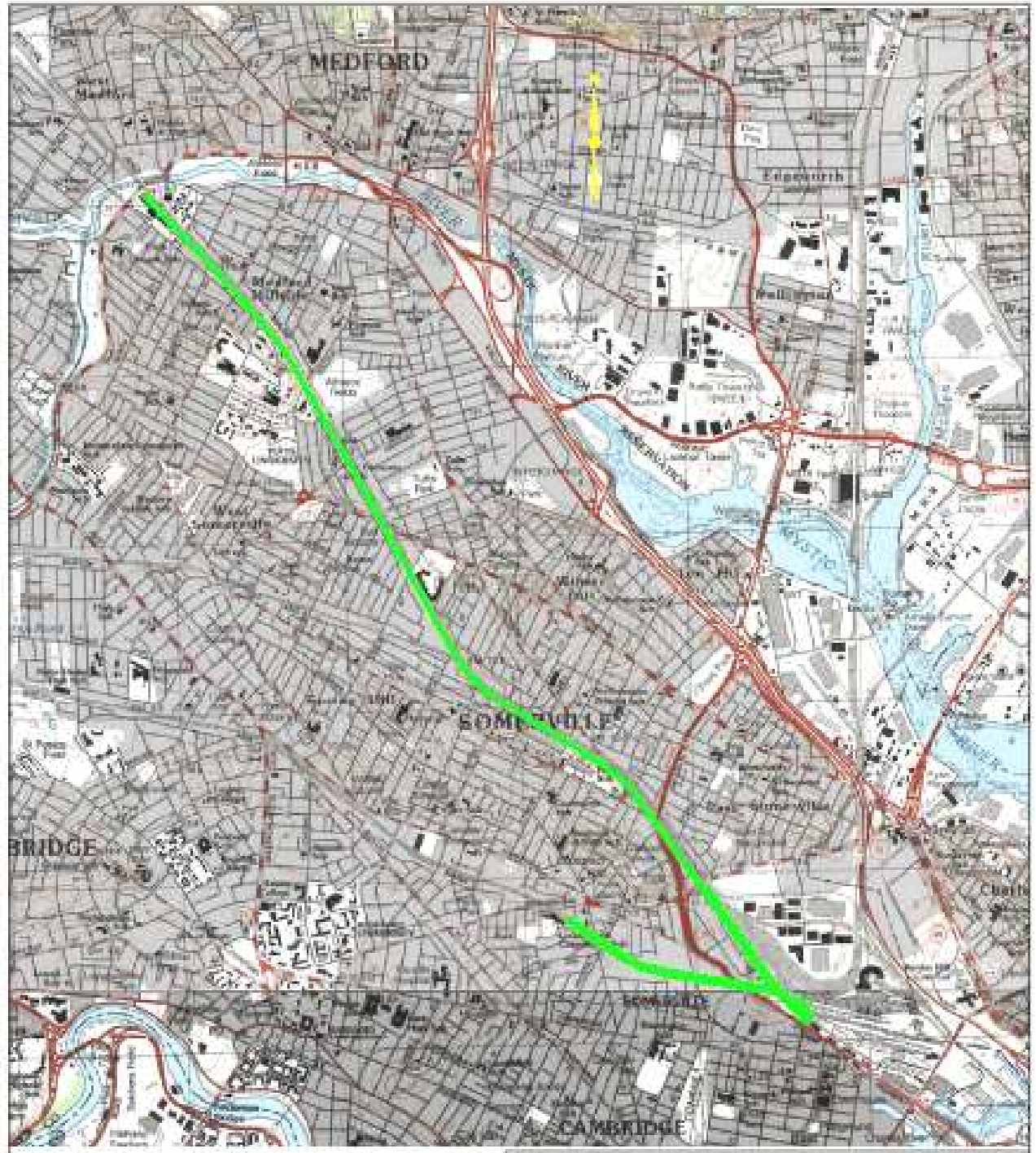
**MASSACHUSETTS  
EXECUTIVE OFFICE  
OF TRANSPORTATION**

# Project Location

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*Green Line Extension*

**EOT**



# Project Purpose

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- Implement enhancements to transit services for residents in the communities of Somerville, Medford and Cambridge
  - Improve corridor mobility and regional access
  - Boost transit ridership
  - Improve regional air quality
  - Ensure equitable distribution of transit services
  - Support opportunities for smart growth initiatives and sustainable development

# Project History

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- Numerous past studies
- Beyond Lechmere Northwest Corridor Study – MIS/AA (2005)
  - Extensive stakeholder involvement
  - Nine initial build alternatives combining:
    - Green Line
    - Commuter rail
    - Bus rapid transit

# Screening of Alternatives

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- Phase 1 screening reduced nine alternatives to four
  - **1A - Green Line to West Medford**
  - 1B - Green Line to West Medford via Union Square
  - **1C - Green Line to West Medford and to Union Square**
  - 1D - Green Line to Union Square; Com. Rail to West Medford
  - 2A - BRT to West Medford
  - **2B - BRT to West Medford; Green Line to Union Square**
  - 2C - BRT to West Medford via Union Square
  - 2D - BRT to Union Square; Commuter Rail to West Medford
  - **3 - Commuter Rail Shuttle to West Medford**
- Phase 2 evaluation of alternatives
  - Four build alternatives plus TSM (the all bus alternative)
- No preferred alternative identified

# Environmental Review Process

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- Green Line extension is preferred alternative
  - In State Implementation Plan (SIP) for air quality
  - In Draft SIP amendment
  - Numerous public comments received in support
- Single Environmental Impact Report (SEIR)

# SEIR Alternatives

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- No Action
- Green Line Extension
  - extension from relocated Lechmere Station
  - to Medford Hillside (Lowell Line)
  - with spur to Union Square Somerville (Fitchburg Line)



# Green Line Right-of-Way

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- Along Lowell Line to Medford Hillside
  - From relocated Lechmere to before Mystic River
  - Relocate Commuter Rail tracks to east side
  - Two Green Line tracks on west side of ROW
  - ROW width sufficient in most areas except
    - Between Medford St. and School St. (east side)
    - Between Central St. and Lowell St. (east side)
    - Between Broadway and Winchester Place (east side)
    - Between Winthrop St. and North St. (west side)
    - In the vicinity of most stations (west side)



# Green Line Right-of-Way (cont.)

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- Along Fitchburg Line to Union Square
  - From relocated Lechmere to vicinity of Union Square
  - No change to Commuter Rail tracks
  - Two Green Line tracks on north side of ROW
  - ROW width sufficient except
    - In the vicinity of Union Square station (north side)

# Support Infrastructure

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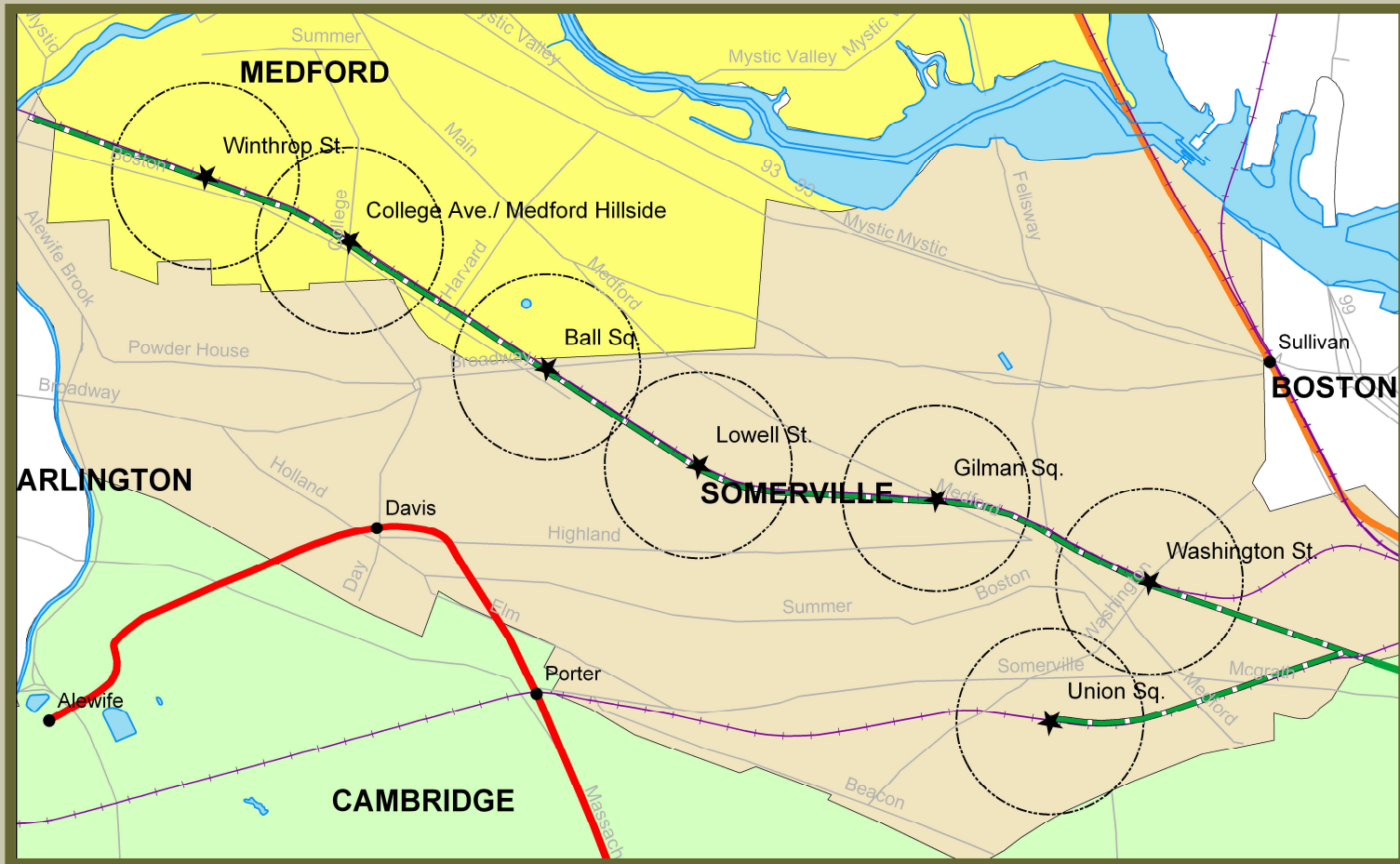
- Embankment removal and construction of retaining walls
- Storm water drainage systems
- Fencing
- Concrete intrusion barrier between Green Line and Commuter Rail
- Overhead catenary and support structures
- Electrical systems and substations
- Signals and communications systems

# Station Locations

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- Stations proposed in the vicinity of:
  - College Avenue/Medford Hillside
  - Broadway/Ball Square, Somerville
  - Lowell Street, Somerville
  - Medford Street/Gilman Square, Somerville
  - Washington Street, Somerville
  - Union Square, Somerville
- Examine feasibility of extension to Winthrop St.

# Proposed Station Locations



Green Line Extension



# Station Facilities

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- No parking facilities
- Bus access and passenger drop-off area
- Station access from bridges - stairway and ramp
- Center platform
- Charlie Ticket vending machines
- On-board fare payment
- Additional right-of-way needed near most stations

# Roadway Bridges

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Inadequate Clearance	Possibly Adequate Clearance	Adequate Clearance
Medford St.	College Ave.	North St.
Lowell St.	Central St.	Cedar St.
Broadway	Sycamore St.	Cross St.
Winthrop St.	School St.	McGrath Highway (Lowell Line)
Prospect St. (Fitchburg Line)	Walnut St.	McGrath Highway (Fitchburg Line)

# Railroad Bridges

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- Washington St. (Lowell Line)
  - Adequate width
  - Condition must be evaluated
- Harvard St. (Lowell Line)
  - Adequate abutments
  - Needs structure for two additional tracks
- Medford St. (Fitchburg Line)
  - Adequate abutments
  - Needs structure for one additional track



# Storage and Maintenance Facility

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- Lechmere Station relocation project
  - New “Yard 8” storage facility
  - Parallel to O’Brien Highway south of Washington St.
- Green Line Extension
  - Expand Yard 8 storage facility
  - Construct maintenance building
  - Land owned by MBTA and Guilford

# Environmental Impacts

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- Land
- Transportation
- Historical/Archeological Resources
- Other

# Land Impacts

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- 54 acres of previously altered land
- New impervious surface at stations
- New buildings <2 acres
- Storm water issues along alignment
  - Especially Medford Hillside area
  - Storm water management plan will be developed to mitigate impacts

# Transportation Impacts

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- Estimated reduction of 9,600 daily vehicle trips
- Relocation of up to 4 miles of commuter rail track
- 4.4 miles of double track beside active rail line
- Impacts on Green Line operations
  - Central subway capacity
  - Signal and power systems
- Removal/relocation of freight trackage or elimination of trackage rights

# Transportation Impacts (cont.)

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- Changes in local bus services
- No new roadways
- No parking at stations – drop-off only
- Employee parking at maintenance facility
- Pedestrian and bicycle facilities at stations
- Coordination with Somerville Community Path

# Historical/Archaeological

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- Susan Russell House - 58 Sycamore St.
- Adjacent to right-of-way
- No alterations anticipated

# Other Possible Impacts

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- Recreation facilities adjacent to right-of-way
  - Tufts Alumni Fields
  - Trum Field Playground
  - Hoyt-Sullivan Playground
- Wetlands
  - No impacted wetlands
  - Wet area near Lowell St.



# Other Possible Impacts (cont.)

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- Hazardous sites
  - Numerous nearby underground storage tanks
  - Numerous nearby hazardous materials sites
- Utilities
  - Bridge modifications may impact water and sewer
  - Electrical substation relocation
    - behind Somerville HS
    - near Union Square

# Mitigation of Impacts

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- Early consideration of station traffic management during design
- Identification of alternative freight rail routes
- Coordination with DEP on hazardous sites
- Storm water management plan
- Construction phasing plan
  - Traffic management plan for bridge closings
  - Maintain utility connectivity
- Coordination with cities on all impacts

# Green Line Extension Schedule

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Expanded Environmental Notification Form	October 2006
SEIR Scoping Session	October 2006
SEIR Notice to Proceed	May 2007
SEIR/Preliminary Design Complete	November 2008
Final Design Complete	May 2011
Start of Construction	November 2011
End Construction/Begin Testing	June 2014
<b>Begin Service</b>	<b>December 2014</b>